STARFIELD, with the 20-foot equatoreal. (W. Lassell, Esq.)

	Starfield Sid. T. h m s	
April 22	At 11 46 6	Astræa precedes *a* ... 6ˢ·57
	11 52 21	is North of *a* 1′ 50″·9
28	12 45 7	precedes *b* ... 26ˢ·3
	12 52 16	is North of *b* 1′ 28″·5

which are the uncorrected results of observation with the micrometer.

The approximate *apparent* places of the stars on the days of observation are

	Mag.	R.A. h m s	N.P.D.	
a	(9·10)	6 1 17·19	68° 40′ 27″·2	by comparison with 2039 B.A.C.
b	(9·10)	6 13 57·08	68 30 38·6	—— 2067

ELEMENTS.

Dr. Peters has obtained the following elements from the Pulkowa *meridian* observations:—

Time of Passage, 1846, June 22·4923, Pulkowa M.T.

Log. mean daily motion	2·9360876
Log. *a*	0·4092793
e	0·18376
φ	10° 35′ 19″·8
Perih. — ☊	353 50 22 ·4
i	5 19 4 ·9
☊	141 29 22 ·3 M. Eq. 1846·0

Sidereal Revolution, 1501·47, Mean Solar Days.

These elements represent the Pulkowa observations as follows:—

		(Calcul. — Obs.) R.A. (in arc).	Dec.
1845.	Dec. 26	+0″·3	+0″·3
	30	−2·1	−1·0
1846.	Jan. 16	+1·0	
	17	+0·6	−0·1
	18	...	−2·7
	25	+2·1	+2·1
	26	+1·0	+1·9
	27	+3·9	−1·1
	28	+7·5	+1·5
	30	+5·4	+1·5
	Feb. 2	+3·4	+1·0
	9	+2·8	+0·5
	10	+0·2	0·0
	19	...	−2·6

Duplicity of BIELA's Comet.

Lieut. M. F. Maury, U.S.N. Director of the Observatory, Washington, "discovered during his observations, on Jan. 13th, a nebulous-looking object, altogether cometary in its appearance, preceding Biela's comet by nine or ten seconds in the lower part of the

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field of view." On the 14th, "both objects had increased about three minutes in right ascension since the night before."

"At the time of the first discovery of their binary character, No. 2 was by estimation judged to be $\frac{1}{8}$ the magnitude, and $\frac{1}{4}$ the intensity of its companion. From that time No. 2 increased rapidly both in magnitude and brilliancy, exhibiting, under the full moon of Feb. 11, a sharp diamond-like point of light near its centre; which at moments seemed to flash and with much brilliancy."

"On Feb. 16th, as I turned the telescope upon the comets in the early twilight of the evening, I was surprised to find No. 2 coming into the field with almost a blaze of whitish light (its colour had been uniformly reddish), while Biela was barely visible. No. 2 was estimated to be equal to Biela as to magnitude, but to have one-third more intensity.

"The next evening was cloudy; and yesterday being clear, I hastened up early to test their relative magnitudes and brilliancy again in early twilight. The contrast was so striking as to call forth an exclamation that Biela surpassed his companion, both in magnitude and intensity; by estimation it exceeded at least twofold, both in the quantity and intensity of its light. Biela was brighter than it had ever appeared before, giving light enough to shew the wire of the micrometer across its nucleus; while No. 2 had assumed its former muddy appearance, excepting that no bright point of concentrated light could be seen in its nucleus, notwithstanding the moon was absent, and atmospherical conditions favourable.

"No. 2 appears to have thrown a light arch of cometary matter from its head over to that of the other; and their tails stretching off below in the field, and nearly in a parallel direction, gives these two objects the singular and beautiful appearance of an arched way in the heavens, through which the stars are sometimes seen to pass."

Brorsen's Comet.

Observations.

HAMBURG. (M. Rumker.)

	Hamburg M.T.	R.A.	Dec.
	h m s	° ′ ″	° ′ ″
1846 March 27	11 25 37·4	355 7 57·4	+60 46 41·7
29	12 33 10·5	351 13 42·9	63 25 19·0
30	11 30 48·2	349 10 50·0	64 35 32·6
April 1	10 23 49·8	344 27 10·5	+66 50 49·7

De Vico's Fourth Comet.

Observations.

	Hamburg M.T.	R.A.	Dec.
	h m s	° ′ ″	° ′ ″
1846 March 27	8 8 1·3	9 58 42·9	+39 14 20·2
30	8 52 20·7	8 58 0·8	41 52 4·0
31	8 17 0·3	8 38 14·3	42 41 8·7
April 16	9 37 57	1 57 49·4	54 51 21·6
18	9 28 3	0 54 10·8	+56 16 5·1

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